

Rana Waqar Tabish

Micro/Molecular Biology | Bioinformatics | Poultry Science

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🌐 researchgate.net/profile/Rana-Waqar-Tabish

Work Experience

 **Graduate Research Assistant** Aug 2022 - Present
Auburn University

- Investigated nutritional strategies to mitigate necrotic enteritis using multi-omics approaches
- Conducted and contributed to multiple live bird experiments
- Performed transcriptome and microbiome analyses to understand disease mechanisms

 **Graduate Teaching Assistant** Aug 2024 - Dec 2024
Auburn University

Course: Advanced Poultry Health (POUL 5080-6080)

- Supported course delivery and discussions on advanced poultry health topics
- Graded case reports and review articles from undergraduate and graduate students and provided feedback

 **Poultry Veterinarian** Oct 2020 - Jul 2022
Ibrahim Poultry, Pakistan

- Diagnosed diseases, devised treatment regimens and structured vaccination protocols for various viral, bacterial and fungal diseases
- Effectively supervised personnel effectively and improved broiler production performance parameters




 **Internship** Feb 2020 - Jul 2020
Research Center for Conservation of Indigenous Breeds

- Performed DNA tests for the identification of pure-bred animals
- Collected data of quantitative and qualitative genetic traits from field animals
- Analyzed data using statistical software and created genetic trends for determining genetic improvement

 **Undergraduate Research Assistant** Jun 2019 - Dec 2019
University of Veterinary and Animal Sciences

- Development of a farmer-friendly molecular assay for the detection of anthelmintic resistance in stomach worms, *Haemonchus contortus*
- Routinely performed DNA extraction, gel electrophoresis, and PCR also observed primer designing and qPCR

Education

-  **Doctor of Philosophy in Poultry Science** Aug 2022 - Present
Auburn University
-  **Graduate Certificate in Bioinformatics** Aug 2022 - Dec 2024
Auburn University
-  **Doctor of Veterinary Medicine (DVM)** Oct 2015 - Jul 2020
University of Veterinary and Animal Sciences
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Publications

1. Fatima A, **Tabish RW**, Naseer M, Shahzad A, Sufyan M, Munawar A, Asghar A, Shahid Z, Khan Z and Rashid M, 2023. Molecular pathology of campylobacter. In: Altaf S, Khan A and Abbas RZ (eds), Zoonosis, Unique Scientific Publishers, Faisalabad, Pakistan, Vol 4: 531-543.
 2. Nasir, A., Sikandar, A., Shakoor, A., Kashif, M., **Tabish, R. W.**, Hussain, Iqbal, M. U. (2023). Detection of subclinical ketosis in dairy buffalo herds of Tehsil Jhang, Punjab, Pakistan. Buffalo Bulletin, 42(3), 305–311.
 3. Akram, S. A., Nasir, A., **Tabish, R. W.**, Ijaz, F., Muhammad, S. A., & Bashir, I. (2021). Horizontal mattress suturing for repairing ruptured muzzle and nasal septum in Nili-Ravi buffalo. Buffalo Bulletin, 40(3), 509–513.
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PhD Projects and Collaborations (Prospective Publications)

1. Longitudinal analysis of microbiota and transcriptome dynamics in broilers under coccidiosis challenge models. **Rana Waqar Tabish**, Nelsa Beckman, Samuel Rochell, Wilmer Pacheco, Rochell, William Dozier, Klint McCafferty, Ruediger Hauck
2. Evaluation of coccidiosis challenge models on broiler performance and digestibility. Nelsa Beckman, **Rana Waqar Tabish**, Wilmer Pacheco, Samuel Rochell, William Dozier, Klint McCafferty, Ruediger Hauck, Samuel Rochell
3. Metagenomic analysis of microbial populations in the broiler jejunum and cecum fed diets with varying levels and concentrations of dietary fiber under a subclinical necrotic enteritis challenge. **Rana Waqar Tabish**, Yang Lin, Matthew Bailey, William Dozier, Klint McCafferty, Samuel Rochell, Ruediger Hauck
4. Transcriptomic profiles of jejunal and cecal mucosa and submucosa in broilers fed diets with varying levels and concentrations of dietary fiber under a subclinical necrotic enteritis challenge. **Rana Waqar Tabish**, Yang Lin, Matthew Bailey, William Dozier, Klint McCafferty, Samuel Rochell, Ruediger Hauck
5. Impact of dietary fiber levels and concentrations on performance and nutrient digestibility in broilers under necrotic enteritis challenge from 1 to 35 days of age. Yang Lin, **Rana Waqar Tabish**, Wilmer Pacheco, Samuel Rochell, William Dozier, Klint McCafferty, Ruediger Hauck, Samuel Rochell
6. Effect of nanosilver-treated feed on intestinal microbiota, jejunal lesion scores and the production efficiency in broiler flock subjected to subclinical necrotic enteritis challenge. Pankaj Gaonkar, **Rana Waqar Tabish**, Ruediger Hauck, Laura Huber
7. Precision fecal microbiota transplant for preventing necrotic enteritis in broilers: microbiota and transcriptome insights. Farnaz Yousefi, **Rana Waqar Tabish**, Ruediger Hauck, Shankumar Mooyottu

Oral Conference Presentations

IPSF 2025: Impact of dietary fiber types and concentrations on jejunal and cecal gene expression in broilers with a subclinical enteric challenge. **Rana Waqar Tabish**, Yang Lin, Samuel Rochell, Wilmer Pacheco, Matthew Bailey, William Dozier, Klint McCafferty, Ruediger Hauck

AAAP 2024: Transcriptome analysis of the jejunal and cecal mucosa and submucosa of broiler chickens with subclinical necrotic enteritis fed diets containing varying calcium concentrations and limestone particle sizes. **Rana Waqar Tabish**, Joseph Gulizia, Jose Vargas, Jose Hernandez, Cristina Simões, Eva Guzman, Wilmer Pacheco, Samuel Rochell, Matthew Bailey, William Dozier, Klint McCafferty, Ruediger Hauck

IPSF 2024: Influence of different calcium levels and limestone particle sizes on the intestinal microbiome in broilers upon subclinical necrotic enteritis challenge. **Rana Waqar Tabish**, Joseph Gulizia, Jose Vargas, Jose Hernandez, Cristina Simões, Eva Guzman, Wilmer Pacheco, Samuel Rochell, Matthew Bailey, William Dozier, Klint McCafferty, Ruediger Hauck

IPSF 2024: The impact of Salmonella Typhimurium and coccidiosis vaccine on the cecal transcriptome in broiler chickens in the late stage of production. Andrea Pietruska, Steven Kitchens, **Rana Tabish**, Maria Terra-Long, Ken Macklin, Stuart Price, Rüdiger Hauck

Wet Lab Skills

- a. Bacterial isolation and purification
- b. DNA & RNA extractions
- c. PCR
- d. Spectrophotometry
- e. Preparation and maintenance of primary cells lines
- f. Experience with necropsy of animal models & embryos
- g. Necrotic enteritis lesion scoring
- h. Microscopy
- i. 16S microbiome library prep

Bioinformatics Skills

- a. Transcriptome profiling
- b. Metagenomic characterization
- c. 16S Microbiome analysis
- d. Protein-protein Interaction and Network Analysis (cytoscape)

Programming Skills

Clouds

- a. Alabama Supercomputer Authority
- b. Easley Cluster

Programming Languages

- a. Bash
- b. R

Awards

Higher Education Commission Academic Scholarship from HEC Pakistan

Jan 2016 - May 2020

Student Merit Scholarship (Twice) from University of Veterinary and Animal Sciences

2017 - 2019

I hereby declare that all the information contained in this resume is in accordance accurate to the best of my knowledge. References can be provided upon request